REMARKS/ARGUMENTS

In the Office Action dated December 13, 2006, the Examiner rejected claims 1-16 and 37-40 under 35 U.S.C. 103 as obvious over the combination of DiStefano (U.S. Patent No. 6,127,724) and Iijima (Japanese Patent Application P2003-030767/U.S. counterpart Publication No. 2004/0155358). Claims 1-16 and 37-40 remain at issue.

THE ART REJECTION

The Examiner has rejected the claims as obvious over the combination of DiStefano and Iijima. The Applicants' strongly disagree. The Examiner has failed to demonstrate a prima facie case of obviousness.

The claims of the present application cover a semiconductor package including, among other elements, a die, a molding interface material on the top surface of the die, and a molding cap covering the die including the molding interface material. The molding interface material is provided between the die and the molding cap for the purpose of increasing the strength of the die. The increased strength helps protect the die from tensile and shear stresses caused by the molding cap material.

A review of the DiStefano and Iijima references, either alone or in combination, fails to teach or suggest the use of a molding interface material between the die and the molding cap.

In the Office Action, the Examiner states that element 52 of Figure 1 of DiStefano is a molding interface material. A review of the DiStefano, however, indicates that the Examiner has misconstrued the reference. DiStefano teaches that element 52 is a "***flexible rear encapsulant***" that occupies the space between the "***rear surface 36 of the chip***" and the top surface of the dielectric element 22, located at the bottom of the chip package. The flexible rear encapsulant 52 of DiStefano is therefore (i) not a molding interface material formed on the top surface of the die 32; and (ii) does not control tensile and/or shear stresses on the top die surface. On the contrary, the flexible encapsulant 52 appears to be filler material. There is no discussion whatsoever describing the filler material 52 acting to relieve or control tensile and/or shear stresses.

The Examiner also refers to column 13 lines 55-65 of DiStefano as teaching a molding interface material. A careful review of DiStefano indicates that the Examiner has again misread the actual teaching of the reference.

Figure 6 of DiStefano discloses a method of controlling shear strain by using a spreader 360 on ***top*** of the package encapsulant 258. The spreader is therefore not (i) formed on the top

surface of the die; and (ii) is not between the die and the molding cap material. See specifically column 13, lines 47-59.

With reference to Figure 7, DiStefano describes another embodiment of dealing with shear stress by changing the geometry of the encapsulant 458. In the embodiment shown, the sidewalls of the encapsulant are outwardly sloped from top to bottom. See lines 60-67 of column 13.

The Iijima reference is directed to a multi-level chip package assembly. The majority of the embodiments show nothing on the top surface of the die 7. See for example Figures 1, 3A-3B, 4A-4D, 5, 6A-6B, 7A-7D, 11, and 12A-12C. In other embodiments, a heat sink 19 and underfill resin 20 are placed over the top surface of the die 7. See for example Figures 8, 9A-9C, and 10. Iijima, hover, fails to teach or suggest the application of molding interface material to control tensile or shear stress on the die.

In conclusion, neither DiStefano or Iijima, either alone or in combination, teach or suggest the use of a molding interface material on the top surface of a die for the purpose of controlling shear and/or tensile stresses caused by the molding cap compound. Since neither reference teaches or suggest the invention as claimed, the proposed combination of DiStefano and Iijima is improper and should be withdrawn.

In view of the above, it is respectfully requested that the Examiner withdraw the rejection of claims 1-16 and 37-40 under 35 U.S.C § 102(b). It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below. If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 500388 (Order No. **ALTRP100**).

Respectfully submitted,
BEYER WEAVER LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P.O. Box 70250
Oakland, CA 94612-0250
Telephone: (408) 255-8001
Facsimile: (408) 255-8002